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United States  
Department of  
Agriculture

Forest Service

Tongass  
National  
Forest  
R10-MB-304c

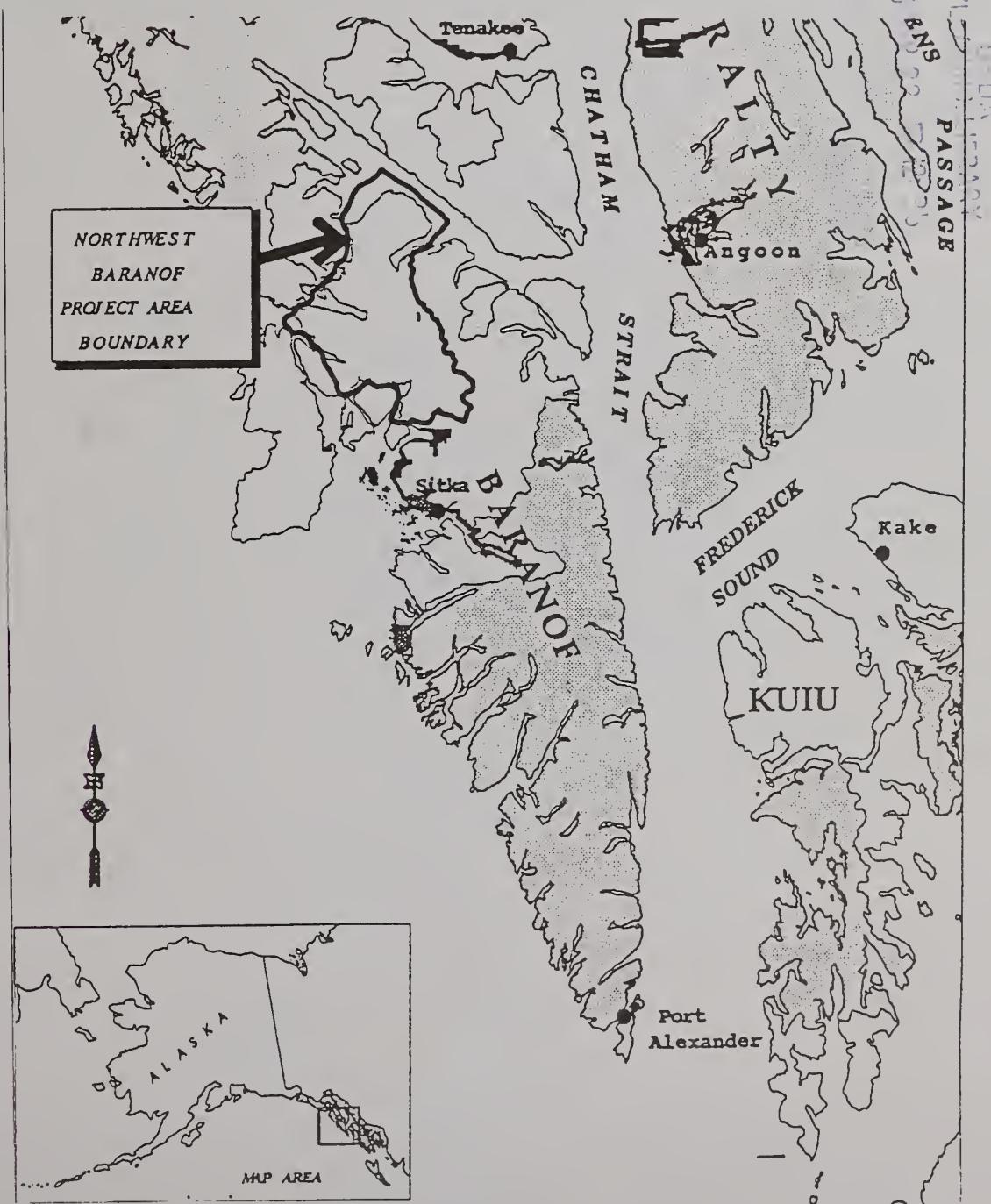
August 1995



# Northwest Baranof Timber Sale(s)

## Draft Environmental Impact Statement

### Summary







United States  
Department of  
Agriculture

Forest  
Service

Region 10  
Tongass National Forest

Chatham Area  
204 Siginaka Way  
Sitka, Alaska 99835  
(907-747-6671)

Reply To: 1950

Date: July 21, 1995

Dear Reviewer:

Enclosed for your review and comment is a copy of the Draft Environmental Impact Statement (EIS) for the Northwest Baranof Timber Sale(s).

If you received a complete set of documents, the following are in the package:

1. Summary
2. Volume I: Draft Environmental Impact Statement
3. Volume II: Appendices
4. Map Packet

If you elected to receive only the Summary and Map Packet, these are enclosed. Contact the Planning Team at the address below if you only received the Summary and would like to receive the additional volumes. The Planning Team has made an effort to make this a more readable document, and has summarized much of their research and analysis. Additional information is filed in the project planning record, and is available at the address below.

There will be a 45 day period during which you may review and comment on the Draft EIS. Comments should be written and must be received by October 2, 1995. These comments should be sent to:

James Thomas, Team Leader  
USDA Forest Service - Sitka Ranger District  
204 Siginaka Way  
Sitka, Alaska 99835

The Draft EIS concludes that there is a significant possibility of a significant restriction on subsistence use of deer. Therefore, in compliance with Section 810 of the Alaska National Interest Lands Conservation Act (ANILCA), a public hearing will be held during the public comment period. This hearing will be held in Sitka the week of September 11, 1995. The date, time, and specific location of the hearing will be announced by future notification in the *Daily Sitka Sentinel* and in the Federal Register.

I want to encourage you to take the time to review and comment on the Draft EIS, as well as participate in the subsistence hearing. Your input will be used in preparation of the Final EIS and the Record of Decision. If you have any questions, please contact James Thomas or any member of the Northwest Baranof Planning Team at (907) 747-6671. Your interest in the management of the Tongass National Forest is appreciated.

Sincerely,

GARY A. MORRISON  
Forest Supervisor

950714 1000 IDT2 1950 JMT





# Summary

## Project Overview

In compliance with Federal regulations, the USDA Forest Service has prepared this Draft Environmental Impact Statement (EIS) for proposed timber harvest and related activities in the Northwest Baranof Project Area. The Northwest Baranof Project Area is located on the Sitka Ranger District of the Chatham Area, Tongass National Forest (See Figure S-1).

This EIS follows the format established in the Council on Environmental Quality (CEQ) regulations (40 CFR 1500-1508). In this document, we disclose the physical, biological, economic, and social consequences of five alternatives, including the no-action alternative.

## Purpose and Need

The purpose and need for the Northwest Baranof Project is to implement direction contained in the Tongass Land Management Plan (TLMP), as amended (USDA Forest Service 1979, 1986), to help provide a sustained level of timber supply to meet annual and TLMP planning cycle market demand, and to provide local employment in the wood products industry, consistent with providing for the multiple use and sustained yield of all renewable forest resources. The Northwest Baranof Project is expected to provide between 30 and 100 mmbf of timber, given the guidance in the TLMP.

The TLMP currently provides for management of about 38 percent of the Project Area for intensive resource use and development with an emphasis on commodity resources such as timber. Under TLMP, this 38 percent has been given land use designation (LUD) IV. The TLMP provides for management of the other 62 percent of the Project Area for a variety of uses, including timber production (LUD III). The TLMP schedules timber sale preparation for all Management Areas in the Project Area. A comparison of the Desired Future Condition for the Project Area, as reflected in TLMP direction, with the existing condition shows the need to convert suitable stands of old growth timber to managed productive stands capable of long-term timber production.

Section 101 of the Tongass Timber Reform Act of 1990 (TTRA), directs the USDA Forest Service "... to the extent consistent with providing for the multiple use and sustained yield of all renewable forest resources, seek to provide a supply of timber from the Tongass National Forest which (1) meets the annual market demand for timber from such forest and (2) meets the market demand from such forest for each planning cycle." Section 101 of the TTRA specifies that Forest Service efforts to seek to meet market demand are subject to appropriations, National Forest Management Act (NFMA) requirements, and other applicable law. Providing a timber supply from the Tongass for sustained local wood products industry employment and related economic and social benefits is an objective of the TLMP, the Alaska National Interest Lands Conservation Act (ANILCA), as amended by the TTRA, and the Ketchikan Pulp Company (KPC) long-term contract.

# Summary

Two indicators of market demand are used here in further defining the need. First, the price of bids for timber in the region remains high. Independent sales continue to sell for more than the appraised value. This reflects the nationwide and world price and demand for timber. Second, there is a demonstrated mill capacity in the region to process the logs, if the supply of timber is available. There is also a projected need for the timber volume being considered from this project area for the Forest Service to come closer to meeting an objective of providing a three year supply of timber under contract to the existing dependent industry, as a means of providing for stability in relation to fluctuating market demand (Morse 1995). There is a substantial component of the economy of Southeast Alaska that is dependent on a viable timber industry. Based on these factors, the need for the project is clearly indicated.

At this time, the timber volume from this project is currently scheduled to be made available to the independent timber sale program and not to KPC. Any KPC long-term contract offerings implemented through this Project will help meet KPC long-term contract timber supply needs. The KPC timber sale contract (USDA Forest Service. 1951. Contract Number A10fs-1042), includes the following provisions:

**B0.61 Timber Offering Schedule.** Each year prior to February 15, Forest Service after consultation with purchaser shall develop a tentative Offering schedule based upon the Tongass National Forest Land and Resource Management Plan, which shall display Offering Areas and timber volumes proposed for harvest, and the expected NEPA process commencement and completion date for making any additional Offerings under the terms of this contract. To the extent authorized by law, Offering Areas may be identified for harvest outside the Sale Area, as needed to meet sale volume requirements. The tentative schedule shall list sufficient timber volume and schedule commencement of the NEPA process by Offering Area or Areas to provide Purchaser a Current Timber Supply sufficient for at least three years of operations hereunder or until the contract termination date, whichever occurs first, adjusting for the provisions of B0.63 and B6.36. In developing the schedule, Forest Service will consider the production requirements of Purchaser's manufacturing facilities.

**B0.62 Specifying Offerings for Harvest.** Based upon the tentative schedule and NEPA process, and consistent with timber sale planning, management requirements, and environmental assessment procedures for independent Tongass National Forest timber sales, Forest Service after consultation with Purchaser and completion of the NEPA process, shall specify and additional Offerings. Forest Service shall seek to specify sufficient Offerings to maintain a Current Timber Supply in all Offering Areas that totals at least three years of operations hereunder or until the contract termination date, whichever occurs first, and which meets the production requirements of Purchaser's manufacturing facilities.

The maximum average annual rate per year at which KPC is generally allowed to harvest is 192.5 MMBF under long term contract section B0.52. KPC's average harvest rate, obtained from contract records, during the five-year period from March 1, 1989 through February 28, 1994 was 185.4 MMBF per year. Therefore, a three year supply of timber for KPC's operations under the contract is currently estimated to range from 556.2 to 577.5 mmbf.

## Summary

As of June 1, 1995, KPC had a current timber supply of approximately 193 MMBF. The maximum volume of timber that can be provided to KPC from within the contract area in the remainder of fiscal year 1995 is about 93 MMBF. The maximum amount that can be provided to KPC from within the contract area during 1996 is expected to be about 174.1 and during 1997 about 155.9 MMBF. Assuming the maximum annual average harvest rate of 192.5 MMBF, a timber supply of 93.5 MMBF would be available at the end of 1995, 75.1 MMBF at the end of 1996, and 38.5 MMBF at the end of 1997. These levels would fall well short of meeting the objective of specifying a three-year supply for operations under the contract, considering on-going harvest at either the maximum or historic rates noted above.

There have been suggestions that layout and other actions could be expedited to increase the amounts available from the contract area through 1997. However the current assessment is that further expediting layout is not feasible, even with significant increased funding, while maintaining a reasonable assurance of quality work. The Forest Service has made efforts to accelerate the preparation of new offerings within the contract area. At present, about 852.7 MMBF in new timber projects are being planned within the contract area over the duration of the contract, beyond what is projected in the 1995 - 1997 figures presented above. However, because of the amount of time required to prepare new offerings in accordance with applicable laws, none of this volume is projected to be available until after fiscal year 1997. It remains to be seen how much of the volume in preparation will be cleared through the NEPA process and when it will be available.

Consequently, additional timber from outside the KPC contract area is needed in order to meet the three-year timber supply objective. Sale offerings currently scheduled, undergoing NEPA evaluation, or at some other stage in the preparation process are projected to be needed to help meet the KPC long-term contract and independent sale program's three-year supply objectives. If any currently planned independent sales were converted to KPC contract offerings, equivalent volume currently planned for KPC contract offerings would then need to be substituted as independent sale offerings. The first offerings from the Northwest Baranof Project Area could be made available in 1996 to help meet either three-year supply objective.

## Project Area

The Northwest Baranof Project Area is located in the Tongass National Forest at the northwest end of Baranof Island. It lies approximately five miles north of Sitka, Alaska and encompasses 156,003 acres. The Project Area includes the major watersheds of Rodman Creek, Fish Bay Creek, and Nakwasina River. It also includes the lands on Baranof Island bordered by Nakwasina Sound, Nakwasina Passage, Neva Strait, and Peril Strait (Figure S-1).

# Summary

## Background

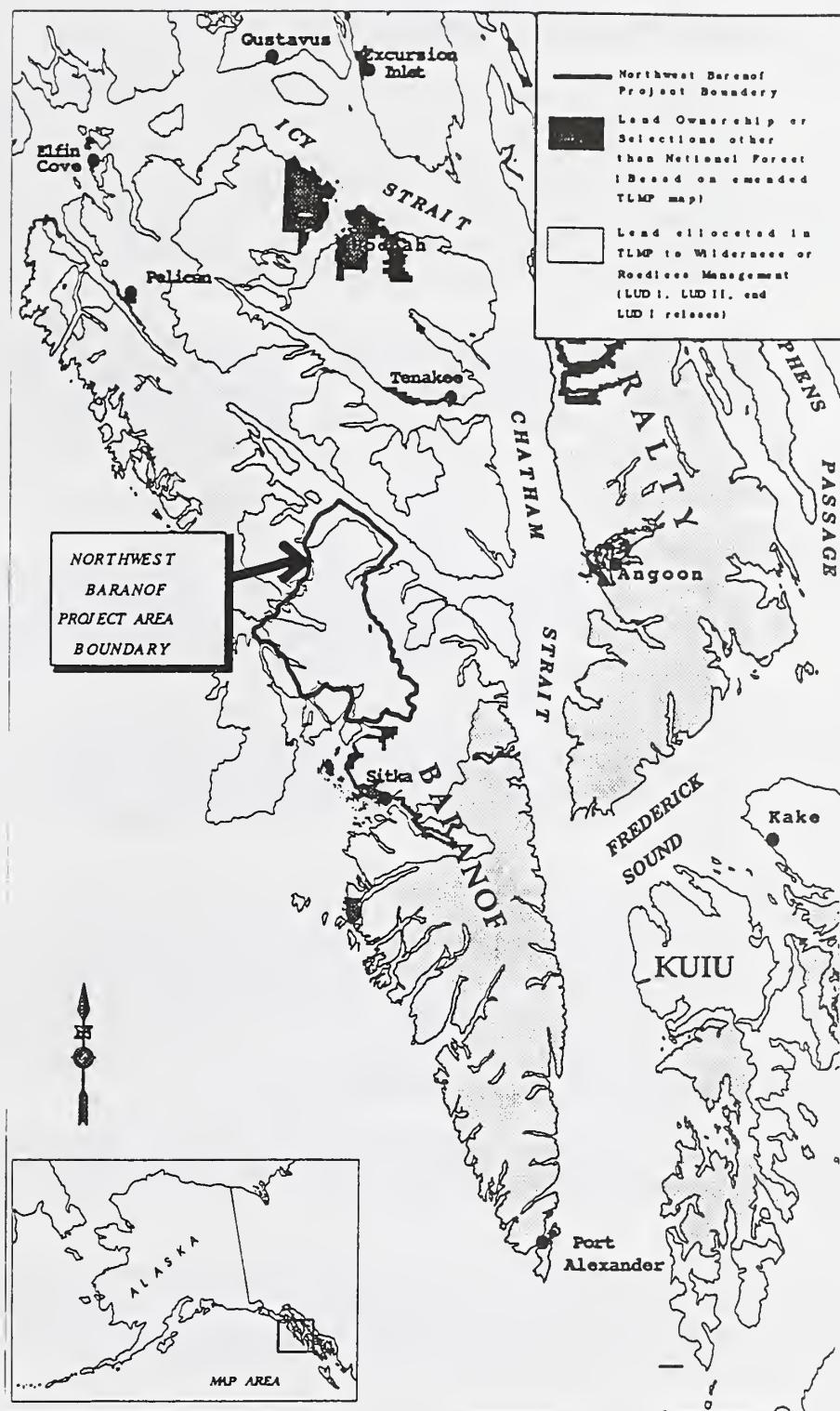
The Project Area was, until recently, part of the Alaska Pulp Corporation (APC) long-term timber sale contract area. In 1956, the Forest Service entered into a contract with the Alaska Lumber and Pulp Company (later renamed Alaska Pulp Corporation) for the sale and harvest of timber in Southeast Alaska for a 50-year period beginning in 1961 and ending in 2011. On September 30, 1993, APC ceased operation of its Sitka pulp mill, whereupon the Forest Service officially terminated the long-term timber sale contract with APC on April 14, 1994. Termination of the APC contract shifted the focus for making timber available in the Project Area from APC long-term timber sale contract offerings to competitive independent timber sales. Since the termination of the APC contract, the Forest Service has continued to assess market demand for timber in Southeast Alaska as part of its independent timber sale program. This market assessment continues to affirm market demand for timber volume in Southeast Alaska.

In addition to the independent timber sale program, the termination of the APC long-term contract has also resulted in timber that was previously committed to the APC contract being available for Ketchikan Pulp Company (KPC) under its long-term contract. KPC operates a pulp mill and a sawmill in Ketchikan and a sawmill in Metlakatla. The KPC operation was a result of a 50-year contract between the Forest Service and KPC for sale and harvest of timber in Southeast Alaska beginning in 1954 and ending in 2004.

In 1994, the scheduling of a number of timber sale projects was adjusted in order to maintain options for addressing new resource management issues. The Forest Service updated KPC's long-term contract tentative offering schedule to reflect ending issues concerning wildlife species viability and potential species listing under the Endangered Species Act. Some of the original volume scheduled for the Alaska Pulp Corporation long-term contract is now being scheduled for the KPC contract. The Forest Service projects that offerings to KPC scheduled in 1994 and 1995 from the Stikine and Chatham Areas will be needed to help meet sale volume requirements.

# Summary

Figure S-1  
Vicinity Map



# Summary

## Issues To Be Addressed

The NEPA requires federal agencies to determine the scope of the issues to be addressed and to identify the significant issues related to the proposed action. For the Northwest Baranof Project, these issues were identified through the scoping process described in the previous section. Issues were raised by the public, which included individuals; organizations; other Federal, State, and local agencies; and affected Indian Tribes. Some of these issues were identified through scoping within the Forest Service and relate to concerns about specific resources and legal requirements.

We analyzed the issues raised during scoping and grouped similar issues when appropriate. We determined the following issues to be significant and within the scope of the project. In formulating alternatives we considered each of the issues and addressed them in some manner in all alternatives. We considered one issue but eliminated it from detailed study because resolution falls outside the scope of the Northwest Baranof Project (see page 16).

### Fish Habitat and Water Quality

The fisheries resource on the Tongass National Forest contributes significantly to the economic, recreational, and subsistence needs of Southeast Alaska residents. Streamside habitat provides important shelter, hiding places, food, and rearing areas for salmon. Changes in streamside habitat due to logging or road construction could alter a stream's ability to produce fish.

Past logging may have adversely affected fish habitat in some rivers and streams north of Sitka. The streams within the Project Area support many salmon. Maintaining, enhancing, and rehabilitating fish habitat is an important concern for many Sitka residents.

### Wildlife Habitat and Populations

The Project Area supports a wide variety of wildlife species. Two species of particular concern are Sitka black-tailed deer and mountain goat. Sustainable populations of deer are important to the quality of life of many Sitka residents. The maintenance of adequate deer winter range is critical for survival of deer populations. Logging may reduce available winter habitat for deer and, as a result, may contribute to reduced deer populations in some areas over the long term.

Access to goat winter range at the headwaters of Noxon Creek afforded by additional road construction could cause increased hunting pressure on this herd of goats.

### Old Growth

Old-growth forests are valuable because of their biological diversity, wildlife habitat, recreation opportunities, scenic quality, soil productivity, and water quality. These forests are also a source of high quality timber. Balancing these important but conflicting values of old growth is an important and difficult planning problem.

The term fragmentation describes the size and distribution of isolated old-growth forest tracts caused by natural conditions or logging activities. The size of old-growth patches,

# Summary

and corridors that connect old-growth patches, are important in managing wildlife habitats and for biological diversity. Old-growth fragmentation due to road construction and logging is a concern.

## Marine Environment

Marine fish and shellfish productivity may be affected by the location and design of log transfer facilities (LTFs) and log storage areas, and by bark accumulations that may occur as a result of their use. A specific concern is the proposed LTF in St. John Baptist Bay which could affect the sable fishery there. In addition, the proposed LTFs in Nakwasina Passage and Sound may adversely affect crabbing in that area.

Marine mammal populations may be affected by the location of LTFs and the activity associated with logging and log transportation. For example, a seal haul-out near the proposed LTF at Noxon Creek may be affected.

## Subsistence

Maintaining subsistence opportunities on Baranof Island is of concern to many rural residents. This area is used for hunting, trapping, fishing, and gathering. Subsistence foods supplements the diets of many people. The Native American lifestyle in Southeast Alaska is dependent upon subsistence resources for the preservation of cultural customs and traditions. The subsistence lifestyle reflects deeply-held values, attitudes, and beliefs of both Native and non-Native people.

The location and size of logging camps, and the length of time they are in use, are of concern because of increased competition for subsistence resources. In addition, access provided by logging roads may increase competition with Sitka residents for hunting, trapping, fishing, and gathering above existing levels.

## Recreation

Outdoor recreation opportunities are important to the quality of life for many Southeast Alaska residents. Dense rain forests, abundant fish and wildlife, and miles of protected waterway combined with the vast and remote character of the area, provide a unique setting for quality recreation experiences. Logging, road construction, and related activities will alter some recreational settings over the short-term and/or long-term.

The lack of roads and the necessity for access from saltwater provide a unique recreational setting appreciated by visitors and residents alike. A difficult terrain, dense vegetation, and limited anchorages confine many recreational activities to accessible shorelines. LTFs, log storage, and logging camps located in these popular areas may displace recreational use during logging. Popular areas that could be affected include Schulze Cove, St. John Baptist Bay, and Nakwasina Passage.

Road construction and reconstruction have the potential for opening new areas for road related recreation. Management objectives of roads after logging will determine if access is short term or long term. Although some people desire additional motorized recreational opportunities, others may oppose opening more areas to motorized use.

# Summary

## Scenic Quality

Marine Highway travelers view dense spruce and hemlock rain forests, abundant fish and wildlife, rugged mountains, secluded fjords and bays, and miles of protected waterways. The unique natural setting and outstanding scenery are an important component of the visitor's experience. Tourism has helped diversify the economy of Sitka, and maintaining the scenic quality of the landscape is of concern to both visitors and the community. Timber harvest has the potential for affecting the scenery along the marine highway.

Many people have chosen to live in or visit Sitka because of the opportunity to work or play in an area with outstanding scenic quality. Fish Bay, St. John Baptist Bay, Nakwasina Passage, and Nakwasina Sound provide many opportunities for saltwater recreation and small boat travel. Harvest units, roads, and log transfer facilities may have an adverse affect on the scenery in these areas.

## Economic and Social Quality

The lifestyles, values, and quality of life for the residents of Southeast Alaska are highly dependent on the surrounding National Forest. Our forests provide a valuable setting for recreation, hunting, fishing, and subsistence use. They also provide a setting for people seeking a remote, uncrowded living condition and for Native residents seeking to maintain customary and traditional uses. Timber harvests and road construction may have an adverse affect on the quality of life for some people.

The forests of the Northwest Baranof Project Area are a valuable economic resource for Southeast Alaska and the community of Sitka. They are valuable as a setting for commercial recreation and tourism, and spawning habitat for salmon which support a large commercial fishing industry. There is concern that widespread timber harvest and road construction would have an adverse affect on these important industries.

The forest also provides valuable timber that may be used to support a forestry and wood products industry. Since there is not currently a major wood processing industry in Sitka, many Sitka residents oppose logging in "Sitka's back yard." There is also a strong interest in establishing a small wood products industry for the Sitka area. On a larger scale, logging provides jobs for many workers in Southeast Alaska. Logs harvested in the forests around Sitka may be processed at many sites in Southeast Alaska to meet local, national, and international demand for wood products. The closure of the Sitka pulp mill has resulted in a shortage of beach logs which are used by Sitka residents for firewood. This may result in increased demand for free use or commercial timber harvest.

The amount of timber to be harvested and its value compared to logging costs is a concern. This is particularly true if small amounts of timber are to be harvested with expensive roads or yarding systems. The community of Sitka receives payments from the Forest Service in lieu of taxes for income generated from the National Forest. The primary source of these payments has been timber sales. As timber harvests decrease, the payments in lieu of taxes also decrease.

# Summary

## Heritage Resources

The Northwest Baranof Project Area lies largely within an area traditionally claimed by the Sitka Tlingit. Because of the importance of this area in preserving the Tlingit culture and traditional values, the Forest Service is working closely with the Sitka Tribe of Alaska to identify sites of cultural importance. Once identified, the Forest Service can protect these sites by avoiding them when planning management activities.

Historic properties are those properties included in or eligible for inclusion in the National Register of Historic Places. We almost always choose to avoid historic properties rather than mitigating adverse effects and, in response to this issue, have avoided all known cultural resource sites in the Project Area in all action alternatives.

# Summary

## Alternative Development

In this Draft EIS, five alternatives explore ways to satisfy public concerns and resolve the issues discussed in Chapter 1. These include a no-action alternative and four action alternatives. Each of the action alternatives represented in this EIS responds differently to the issues discussed in Chapter 1. The action alternatives were developed as site-specific proposals, the environmental consequence of which could be clearly displayed.

Collectively the alternatives were developed to explore ways to satisfy public concerns and resolve issues, while responding to the purpose and need for the project. From this range of alternatives, the Forest Supervisor has a basis for making an informed decision.

In developing the harvest units and road systems for this Project, we followed direction, standards, and guidelines contained in the current TLMP, Alaska Regional Guide, and applicable Forest Service manuals and handbooks. The first step in formulating alternatives was the development of a logging plan that identified timber harvest units and the associated road systems, that could be assigned to any of the alternatives. This unit and road “pool” was carefully examined in the field and reviewed by the ID Team before it was finalized. Next we determined various options to resolve the issues and identified various approaches or “themes” that could serve to guide the alternatives. After further review, we finalized the alternative themes, assigned specific units and roads to each alternative, and insured that each alternative considered in detail is consistent with the current TLMP. Finally we have identified mitigation measures, enhancement projects, and the monitoring requirements which are listed in Appendix A.

The ID Team looked at the proposed harvest units from two levels: the landscape level, which considers effects of management practices over large areas (such as VCUs, watersheds, or viewsheds); and the stand level, which deals with individual harvest units. At the landscape level, we maintain large tracts of undisturbed old growth by concentrating timber harvest in certain areas, minimizing the edge effect by designing larger harvest units, and using fringe and stream buffers for corridors between old-growth blocks.

At the stand level, we reduced harsh edges by unit placement and feathering edges of cutting units, and provide for stand diversity by leaving snags in harvest units (where safety regulations allow) or retaining small patches of uncut timber in harvest units (where feasible and practical). We considered all of these concepts during the selection and design of individual harvest units and roads, and the assignment of these to specific alternatives.

## Alternatives Considered in Detail

We considered five alternatives (four action alternatives and a no-action proposal) in detail. Each alternative was developed to respond differently to the issues, and to provide a range of choices for the Forest Supervisor and the public. We have included maps (distributed with this Draft EIS) which illustrate the proposed roads and harvest units for each of the five alternatives.

For each action alternative, there is a discussion of the theme or intent of the alternative. Following the description of the alternatives, there is a discussion of post-harvest silvicultural treatments, enhancement opportunities, and mitigation measures. Table S-1 summarizes the volume and acres of timber harvest and logging method, and roads proposed for development and use.

### Alternative 1 (The Proposed Action)

This alternative represents the “proposed action” as presented during public scoping and described earlier in this Chapter. It has been modified since public scoping to reflect harvest units dropped from further consideration because of resource concerns. This alternative distributes timber harvest throughout the Northwest Baranof Project Area. It proposes timber sales in seven individual geographic areas within the Project Area. Alternative 1 proposes timber harvest on 1,725 acres with an output of approximately 35.5 mmbf of sawlog volume.

Wildlife habitat and subsistence resources are maintained along the north shores of Nakwasina Passage and St. John Baptist Bay, and throughout the Fish Bay drainage. The current visual quality on Baranof Island along the Alaska Marine Highway route would be maintained from Fish Bay to Sitka. Opportunity for increased motorized vehicle, bicycle, and foot access would be provided on the road system south of St. John Baptist Bay.

### Alternative 2

This alternative concentrates timber harvest in three areas that have had previous logging activity: Rodman Bay, St. John Baptist Bay, and Lisa Creek. It also minimizes further fragmentation of old growth as a result of additional timber harvest, especially in and adjacent to the Fish Bay and Nakwasina River watersheds. This alternative maintains the existing conditions in much of the Northwest Baranof Project Area by deferring timber harvest in many of the areas which have seen only limited harvest in the past. Alternative 2 proposes timber harvest on 2,505 acres with an output of approximately 51.9 mmbf of sawlog volume.

Wildlife habitat and traditional subsistence use areas are maintained at the head of Nakwasina Sound, along the north shores of Nakwasina Passage and St. John Baptist Bay and throughout the Fish Bay drainage. The current visual quality on Baranof Island along the Alaska Marine Highway route would be maintained from Deadman Reach to St. John Baptist Bay. Logging economics would be boosted by using reconstructed roads in this alternative.

# Summary

## Alternative 3

This alternative concentrates timber harvest in the north end of the Northwest Baranof Project Area with logging at Schulze Cove and Rodman Bay. It also defers timber harvest in those portions of the Project Area closest to Sitka. This alternative emphasizes the maintenance of existing conditions south of Fish Bay and minimizes further fragmentation of old growth in that area. Alternative 3 proposes timber harvest on 1,889 acres with an output of approximately 38.8 mmbf of sawlog volume.

Wildlife habitat and traditional subsistence use areas south of Fish Bay are not affected by this alternative. The current visual quality on Baranof Island along the Alaska Marine Highway route would be maintained from Fish Bay to Sitka.

## Alternative 4

This alternative distributes timber harvest throughout the Project Area. It proposes the highest level of timber harvest of all the alternatives while meeting standards and guidelines for other resources, and current environmental, political, and social constraints. It proposes timber sales in seven individual geographic areas within the Project Area and creates a mosaic of diverse forest age structures. Alternative 4 proposes timber harvest on 3,263 acres with an output of approximately 66.9 mmbf of sawlog volume.

ORV use near Sitka would be enhanced due to road construction and maintenance. This alternative provides the opportunity for better sale scheduling and economic return both locally and nationally. Alternative 4 most nearly meets the direction of the current Tongass Land Management Plan for resource production in the Project Area.

## Alternative 5 - No Action

This alternative provides the baseline for measuring effects of all action alternatives. It is required by the NEPA, and may be selected by the Forest Supervisor. No road construction or logging would occur under this alternative.

# Summary

Table S-1  
Alternative Summary

	Alt. 1	Alt. 2	Alt. 3	Alt. 4
Sawlog Volume (mmbf)	35.5	51.9	38.8	66.9
Proposed Harvest Acres	1,725	2,505	1,889	3,263
Number of Units	96	107	71	153
<b>Proposed Harvest by Harvest System</b>				
	Alt. 1	Alt. 2	Alt. 3	Alt. 4
Skyline Acres	885 51%	862 34%	590 31%	1,196 37%
Helicopter Acres	840 49%	1,643 66%	1299 69%	2,067 63%
Helicopter Volume (mmbf)	15.1	32.2	24.8	39.5
<b>Proposed Harvest Acres by Silvicultural Prescription</b>				
	Alt. 1	Alt. 2	Alt. 3	Alt. 4
Clearcut w/Reserves	810 47%	1,002 40%	775 41%	1,338 41%
Seed Tree Cut	347 20%	626 25%	604 32%	816 25%
Overstory Removal	325 19%	576 23%	208 11%	652 20%
Group Selection	243 14%	301 12%	302 16%	457 14%
<b>Proposed Harvest Volume (Sawlog) by Silvicultural Prescription (in mmbf)</b>				
	Alt. 1	Alt. 2	Alt. 3	Alt. 4
Clearcut w/Reserves	19.7	23.6	18.6	32.5
Seed Tree Cut	7.9	15.2	14.0	18.9
Overstory Removal	6.6	11.4	4.4	12.8
Group Selection	1.3	1.7	1.8	2.6
<b>Proposed Roads and Log Transfer Facilities (LTFs), and Helicopter Insertion Log Transfer Sites (HILTS)</b>				
	Alt. 1	Alt. 2	Alt. 3	Alt. 4
New Road Miles	18.5	18.5	8.9	30.4
Reconstruction Miles	11.9	13.1	9.0	16.5
Temporary Road Miles	12.2	8.2	6.5	14.4
No. of LTFs	6	4	3	7
No. of HILTS	1	1	1	2

# Summary

## Comparison of Alternatives by Issue

### Fish Habitat

Our evaluation in Chapter 4 shows that the potential effects on fish habitat and related water quality are minimal for all alternatives. All alternatives meet the requirements of the Clean Water Act. We will continue to adhere to the TTRA's requirement to provide a minimum 100-foot buffer on Class I streams and Class II streams flowing directly into Class I streams, which will minimize direct stream channel impacts from proposed timber harvest and road construction.

Streams encountered during road construction are crossed by culverts or bridges. We use bridges where large volumes of water are anticipated. Bridges would be left in place in alternatives that include road maintenance after harvest (see Appendix D). Culverts are used to cross small drainages and to provide relief drainage under the road as necessary. Culverts placed in Class I or II streams are designed and installed to allow fish passage.

Both the Tongass Timber Reform Act and the Tongass Land Management Plan require that we use Best Management Practices (BMPs) to prevent degradation of streams during road construction. The BMPs prescribe numerous timing and construction constraints for instream road construction work and we make BMPs a part of all stream course protection plans for Class I and II streams. Fish passage requirements for Class I and II stream crossings are also specified.

Although culverts and bridges will be installed using BMPs, each bridge or culvert constitutes a potential risk to fish habitat should the structure fail due to unforeseen natural occurrences. Although such risks are minimal, a comparison of the numbers of Class I and Class II stream crossings helps the decision maker assess the relative risks of each alternative. Table S-2 lists the number of Class I and II stream crossings within each alternative.

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Table S-2  
Proposed Construction of Roads Across Class I and II Streams by Alternative

	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5 No Action
Class I Stream Crossings	29	27	17	36	0
Class II Stream Crossings	7	7	4	10	0

Source: Lorenz 1995.

### Wildlife Habitat and Populations

Table S-3 displays potential reduction in wildlife habitat capabilities for deer, bear, marten, and mountain goat in the Northwest Baranof Project Area. This table displays the estimated habitat capability in 1995, and the estimated reduction in this capability if the actions proposed are implemented. Habitat capability does not indicate current or future populations, but is a relative means to estimate and compare effects.

## Summary

All action alternatives would decrease habitat capabilities by 2 percent or less for deer, 1 percent or less for brown bear, 4 percent or less for marten, and 2 percent or less for mountain goat. Alternative 5 would maintain the current capabilities for wildlife.

Table S-3  
**Potential Reduction in Wildlife Habitat Capability in the Project Area by Alternative**

Species	1995 Habitat Capability	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5 No Action
Sitka Black-tailed Deer	4,220	-1	-<2	-1	-2	0
Brown Bear	183	-<1	-1	-<1	-<2	0
Marten	256	-2	-3	-2	-4	0
Mountain Goat	65	-2	-3	-<1	-3	0

Source: Hartmann 1995.

## Old Growth

Old-growth forests are ecosystems distinguished by the presence of large trees, accumulations of large dead woody material and a variety of canopy layers. For inventory purposes we define old-growth forest in the Geographic Information System (GIS) data base as, "forest habitat over 150 years old with an average diameter at breast height greater than nine inches, and with timber volumes greater than 8,000 board feet per acre." Based on this definition, a total of 51,651 acres of old-growth forest occur in the Northwest Baranof Project Area at this time.

Table S-4  
**Acres of Old Growth**

	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5 No Action
Acres Remaining	49,979	46,309	49,892	48,573	51,651
Percent of Current	97%	95%	96%	94%	100%

Source: Hartmann 1995.

## Marine Environment

The effects of timber harvest and road construction on shellfish populations would be minimal for all the alternatives. Application of the siting guidelines developed by the Alaska Timber Task Force will minimize the potential effects of LTFs on shellfish populations. The short period of use and relatively small volume of timber that will go through the LTFs will also minimize bark accumulation. Construction of the proposed LTFs will affect little of the available marine habitat. Short and long term effects on the marine ecosystem will be minimal as a result of LTF use.

# Summary

Physical access to subsistence fish and shellfish areas will not be significantly changed by any of the action alternatives, however logging camp and LTF traffic may conflict with subsistence users. In addition, the presence of logging camp residents may discourage other users because of crowding. Competition for fish and shellfish is likely to be increased by residents of the logging camps during timber harvest activities (three to five years). Competition would be most noticeable for limited resources like king crab, and least noticeable for more abundant resources like pink salmon.

If an action alternative requires an LTF in St. John Baptist Bay, a barge LTF facility will be used. This will minimize impacts to the bay's sable fishery. Table S-5 indicates the locations of LTFs for each alternative and the estimated volume of timber each LTF would process for each alternative. Locations of proposed LTFs and HILTS are displayed on the Alternative maps.

**Table S-5  
Volume of Timber to be Processed (mmbf) at Each Log Transfer Facility (LTF) or Helicopter Insertion Log Transfer Site (HILTS) by Alternative**

LTF/HILTS	Estimated Sawlog Volume (mmbf) to be Processed			
	Alt. 1	Alt. 2	Alt. 3	Alt. 4
Appleton Cove		5.7		
NE Rodman	4.3		5.6	7.3
Rodman	7.1	24.8	21.9	24.8
Goose Cove (HILTS)		2.9	2.9	2.9
Schulze Cove	8.2		8.4	8.4
St. John Baptist	7.6	13.1		
St. John Baptist S.				4.4
Nakwasina Passage				8.7
Noxon	2.9			2.9
Nakawsina (HILTS)	2.1			2.1
Lisa Creek		5.4		
Lisa Creek NW	3.3			5.4
Total	35.5	51.9	38.8	66.9

Source: Allio 1995

## Subsistence

Our evaluation of subsistence use of deer indicates that there is a significant possibility of

# Summary

a significant restriction of subsistence use of deer in the Project Area for Sitka residents regardless of which alternative is selected. The potential foreseeable effect from the action alternatives do not present a significant possibility of a significant restriction of subsistence uses of brown bear, fur bearers, shellfish, and other foods.

## Recreation

Under all alternatives, the Northwest Baranof Project Area has potential to provide a wide range of recreation opportunities, activities, settings, and experiences. The change in recreation setting because of timber harvest and/or road construction activities may affect the recreational experience and, therefore, overall satisfaction of the forest visitor. Visitors seeking a primitive recreational experience may not be satisfied in an area with active timber management activities. On the other hand, visitors who do not require a natural setting for their recreation activities may appreciate the opportunity to use a road for access to the interior of the Project Area. However, road access will be limited because the area will not be connected to a public road system or the Marine Highway.

Active timber planning and harvest operations may displace recreationists and outfitter/guides from areas of traditional use. Activities which have a low tolerance for the presence of other humans (i.e., bear hunting) will be particularly impacted. These effects are expected to decrease significantly after harvest activities cease and logging camps are closed.

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Table S-6  
**Recreation Net Change From Unloaded to Roaded Setting (in percent of total Project Area)**

	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5 No Action
% Change	6%	5%	4%	8%	0%

Source: Flynn 1995

## Scenic Quality

Alternatives 1 through 4 would result in additional visual impacts of varying degrees in the Northwest Baranof Project Area. These impacts would come primarily from timber harvest, road construction, and the construction of LTFs. These activities create unnatural lines and textures in the landscape which contrast with the rough, even-texture characteristic of Southeast Alaska old-growth rainforest. These visual impacts, in many cases, will be evident to the average forest visitor. We can measure visual impacts by the resulting acres within each Visual Quality Objective, which would occur for each alternative. Visual Quality Objectives are defined in the Glossary.

# Summary

Table S-7  
**Visual Quality Objectives (in acres)**

Visual Quality Objectives	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5 No Action
Retention	3,216	3,208	3,208	3,216	3,216
Partial Retention	47,070	49,258	46,884	40,510	61,046
Modification	75,774	75,441	75,968	81,950	64,030
Maximum Modification	29,670	27,853	29,670	30,084	27,468

Source: Onderkirk 1995

## Economic and Social Quality

Table S-8 displays the annual employment (number of jobs) and income (wages) associated with each alternative. The jobs and wages listed include those both directly and indirectly dependent on the timber industry. The volume of timber harvested for each alternative results in a level of jobs and wages associated with that volume. Jobs and wages are based on the Forest Service economic model, IMPLAN.

Table S-8  
**Projected Timber-Related Employment and Income**

	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5 No Action
Number of Jobs	88	129	96	166	0
Wages (in millions)	\$3.7	\$5.5	\$4.1	\$7.1	0

Source: Morse 1995.

# Summary

**Table S-9**  
**Comparison of Environmental Consequences**

	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5 No Action
<b>Old Growth</b> % Remaining	78	77	78	76	81
<b>Wetlands</b> % of Wetland Acreage Affected	1.5	0.9	0.7	1.3	0
<b>Wildlife Habitats</b> % of Habitat Affected					
Beach Fringe	0.2	0.2	0.1	0.3	0
Estuary Fringe	0.8	0.5	0.2	0.6	0
Riparian	0.8	1.0	0.8	1.2	0
Old Growth	3.3	4.6	3.4	6.1	0
Second Growth	0.5	0.9	0.7	1.1	0
Alpine/Subalpine	0	0	0	0	0
<b>Wildlife Habitat Capability</b> % Reduction of Habitat Capability					
Sitka Black-tailed Deer	-1	-2	-1	-2	0
Brown Bear	-1	-1	-1	-1	0
Marten	-2	-3	-2	-4	0
Mountain Goat	-2	-3	-<1	-3	0
Bald Eagle	0	0	0	0	0
<b>Recreation</b> % Change in Setting					
Natural	-5.8	-5.8	-4.0	-9.3	0
Modified	+2.9	+2.9	+2.0	+4.7	0
<b>Visual Quality</b> % Change in Acres					
Retention	0	-0.2	-0.2	0	0
Partial Retention	-22.9	-19.3	-23.2	-33.6	0
Modification	+18.3	+17.8	+18.6	+28.0	0
Maximum Modification	+8.0	+1.4	+8.0	+9.5	0
<b>Economics</b>					
Number of Jobs	88	129	96	166	0
Wages (\$millions)	\$3.7	\$5.5	\$4.1	\$7.1	0







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